Achieving LDN target of India: challenges and pathways

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Achieving the aspiration land degradation neutrality (LDN) target of reclaiming 29.97 million hectares of degraded land by 2030 warrants strategic planning, collaboration, implementation and monitoring at various levels. The present article aimed to define the target at the national, state, and district levels, prioritising districts within each state and suggests a three-pronged strategy, including streamlining central government schemes, collaboration at the state and district level, facilitating district-level planning, identification and inclusion of sustainable land management options in state and district plans, and promoting voluntary adoption by incentivisation and making available the technical know-how in the form of apps, videos, and software. The technique for monitoring LDN progress is also discussed.

Keywords: Land degradation neutrality, land potential, soil organic carbon, sustainable development goal, sustainable land management.

of 2021–30 as the decade of ecosystem restoration by the United Nations[2].

The issue of sustainability is more challenging for India, the world's most populous nation, mainly because of its resource-poor population, higher dependence on natural resources, and poor soil conditions.

The estimated cost of land degradation in India varies from 4% to 5.6% of the gross domestic product (GDP)[3,4]. The major share is due to crop production losses of 13.4 million tonnes (Mt) (ref. 5) caused by water erosion amounting to a loss of $2.51 billion in monetary terms[4]. The crop production losses due to salinity and alkalinity in India are 5.66 and 11.18 Mt respectively.

Though it is technically infeasible to arrest land degradation completely, it is logical to reclaim land area at least equal to the area going through degradation, to maintain a land degradation-neutral state. This logic, of no net loss of healthy and productive land, led to the concept of land degradation neutrality[6,7]. Land degradation neutrality (LDN) is defined as a state whereby the amount and quality of land resources, necessary to support ecosystem functions and services and enhance food security remains stable or increases within specified temporal and spatial scales